

September 28, 2004

BY ELECTRONIC FILING

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

Re: WT Docket No. 02-55  
*Written Ex Parte Presentation*

Dear Ms. Dortch:

As stated in its prior *ex parte* filings in this proceeding, Nextel Communications, Inc. ("Nextel") has urged the Commission to clarify the interference abatement measures adopted in the *Report and Order* (FCC 04-168) ("*R&O*") in the above-referenced proceeding by providing for a transition period interference protection standard. As noted in Nextel's September 16 *ex parte* notice, Nextel hereby submits the attached memorandum to provide further detail regarding this transition period standard.

Pursuant to section 1.1206(b)(1) of the Commission's rules, 47 C.F.R. § 1.1206(b)(1), this letter is being filed electronically for inclusion in the public record of the above-referenced proceeding.

Respectfully submitted,

/s/ Lawrence R. Krevor  
Lawrence R. Krevor  
Vice President – Government Affairs

cc:	Bryan Tramont	Michael Wilhelm
	Sheryl Wilkerson	Nicole McGinnis
	Jennifer Manner	Roberto Mussenden
	Paul Margie	Brian Marengo
	Sam Feder	Herb Zeiler
	Barry Ohlson	Jeffrey Dygert
	John Muleta	
	Catherine Seidel	
	David Furth	

## **Transition Period Interference Protection Standard**

In the *Report and Order* (“*R&O*”) released August 6, 2004 in the Commission’s 800 MHz Public Safety proceeding (WT Docket No. 02-55), the Commission adopted interference abatement measures to mitigate unacceptable CMRS – public safety interference in the 800 MHz band.<sup>1</sup> These measures provide that public safety and other incumbent 800 MHz licensees are entitled to interference protection from CMRS licensees if they are operating at or above a specified signal strength in the area of interference. The signal strength specified in the *R&O*, however, was based on technical assumptions and solutions proposed by the Consensus Parties that are possible only after 800 MHz band reconfiguration is complete, and not during the reconfiguration transition process.

The *R&O* makes the new interference protection standard effective 60 days after it is published in the Federal Register – well in advance of when 800 MHz reconfiguration will be completed in any NPSPAC Region.<sup>2</sup> Providing such interference protection is not practicable in the current interleaved 800 MHz band.<sup>3</sup> Accordingly, as described below, the Commission should clarify its new interference abatement provisions to articulate a Transition Period Interference Protection Standard that takes into account the technical realities of the interleaved public safety-CMRS-private wireless 800 MHz spectrum environment. Upon completing band reconfiguration in a NPSPAC region, the full interference abatement requirements adopted in the *R&O* would automatically become effective.

### **The *R&O*’s Interference Abatement Measures**

- The *R&O* (§§ 88-141) adopted new standards for protecting all “high-site” operators below 817/862 MHz from “CMRS – public safety interference.”
- The *R&O* (§ 105) generally adopted the Consensus Parties’ “Appendix F” interference protection criteria for protecting Class A receivers to a signal level of -101/-104 dBm for portables and mobiles, respectively. *See Ex Parte Submission*

---

<sup>1</sup> The term “CMRS – Public Safety Interference” has been used in this proceeding to refer to interference experienced by 800 MHz public safety, private wireless and high-site Specialized Mobile Radio (“SMR”) systems as an unintended by-product of the routine operation of 800 MHz CMRS operators due to the interleaved allocation of CMRS, public safety and private wireless channels in the band.

<sup>2</sup> The *R&O* provides for reconfiguration to be implemented on a region-by-region basis using the 55 regions the Commission established for coordinating use of the National Public Safety Plan Advisory Committee channels throughout the United States.

<sup>3</sup> As the extensive record in this proceeding demonstrates, if such interference protection were achievable in an interleaved environment, reconfiguration would not have been necessary.

of the Consensus Parties, WT Docket No. 02-55, Attachment 1 at § 2.1.1.a (Aug. 7, 2003).

- The new interference standards and response timelines adopted in the *R&O* will become effective 60 days after publication of the *R&O* in the Federal Register publication, well before 800 MHz band reconfiguration will be completed.
- These interference protection standards were specifically designed, however, for a post-reconfiguration, de-interleaved spectrum environment.
- CMRS carriers cannot meet the new interference protection standards during the reconfiguration transition period during which 800 MHz CMRS, public safety and private wireless channels will remain interleaved.
- Protecting *interleaved* public safety and private wireless operators to a signal level of -101 dBm (portables) and -104 dBm (mobiles) *during 800 MHz band reconfiguration* would require limiting a typical urban Nextel base station, for example, to a maximum Received Signal Strength Indicator (“RSSI”) level of about -61 dBm. This would, in turn, create significant coverage holes in 800 MHz CMRS networks.<sup>4</sup>
- CMRS users would experience degraded service, dropped calls, and reduced 911 call reliability.

#### **Transition Period Interference Protection Standard**

- The Commission should refine the interference abatement measures specified in the *R&O* by providing for a Transition Period Interference Protection Standard that would apply during the band reconfiguration transition period in a NPSPAC Region.
- The Transition Period Interference Protection Standard should:
  - Protect the operational integrity of Public Safety communications systems;
  - Provide flexibility for and avoid undue disruption of CMRS networks by recognizing the technical limits of CMRS – public safety interference mitigation in an interleaved spectrum environment; and
  - Provide an achievable, enforceable interference definition specifying the rights and responsibilities of all 800 MHz licensees.

---

<sup>4</sup> The power limits necessary to meet the post-reconfiguration standard in the still-interleaved transition period spectrum environment would typically create significant coverage gaps for Nextel, Southern LINC and Cellular A Band operators.

- Proposed Transition Period Interference Protection Standard:
  - Full Interference Protection for Public Safety Systems Meeting -85/-88 dBm Signal Strength Threshold. CMRS carriers must protect all 800 MHz Public Safety systems pursuant to the interference abatement measures adopted in the *R&O*, *except that*, to receive full protection, Public Safety licensees using Class A receivers must have a minimum on-street signal level of -85 dBm for portable units and -88 dBm for mobile units in the area experiencing interference.<sup>5</sup>
    - Transition period interference protection levels for Public Safety licensees using non-Class A receivers would be adjusted based upon the receivers' performance specifications. For example, if a class B receiver has an intermodulation rejection specification of 5 dB less than a Class A receiver, its protection threshold would be adjusted to -80 dBm.
  - Modified Transition Period Interference Protection Standard for Public Safety Systems Operating At a Signal Strength Between -85/-88 dBm and -101/-104 dBm. CMRS carriers would be required to provide the following interference protection to Public Safety licensees operating in the area of interference with a signal strength of less than -85 dBm (portable) and -88 dBm (mobile), but greater than or equal to -101 dBm (portable) and -104 dBm (mobile):
    - Mitigate CMRS – public safety interference for up to four (4) of the Public Safety licensee's control channels;
    - Mitigate, to the extent practicable, CMRS – public safety interference on the Public Safety system's voice channels using current Best Practices interference mitigation measures. See FCC News Release, "Wireless Telecommunications Bureau Announces Best Practices Guide for Avoiding Interference Between Public Safety and Commercial Wireless 800 MHz Communications Systems" (Feb. 9, 2001) and *Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications at 800 MHz: A Best Practices Guide* ("Best Practices Guide").
    - If the CMRS carrier or carriers are unable to mitigate interference to a Public Safety licensee's voice channels, the following steps would be taken:
      - All CMRS carriers contributing to the interference would jointly provide to the Public Safety licensee a report documenting the reasons why mitigation is not practicable in the specific circumstances at issue.

---

<sup>5</sup> Determination of the signal strength of the Public Safety systems in the area in which it is experiencing interference would be in accordance with the provisions adopted in the *R&O*.

- All CMRS carriers contributing to the interference must mitigate the voice channel interference as soon as practicable, as band reconfiguration in the Region progresses. The Transition Administrator, the incumbent Public Safety licensee(s), and all involved CMRS licensees are required to cooperatively prioritize the reconfiguration process in that Region to facilitate interference mitigation.
  - If the Public Safety licensee determines, after receiving the CMRS carrier report described above, that serious system degradation is expected to continue to occur, it may request further relief through mediation by the Transition Administrator or through a request filed with the Wireless Telecommunications Bureau and served on all involved CMRS carriers.
  - In implementing the transition period interference mitigation requirements described herein, CMRS licensees are required to provide a minimum C/I+N ratio of 17 dB for 800 MHz Public Safety FM land mobile radio systems. CMRS licensees must use their best efforts to mitigate interference experienced by Public Safety systems for which the manufacturer's C/I+N specification is greater than 17 dB.
- Transition Interference Protection for Non-Public Safety Licensees. CMRS carriers causing interference to non-Public Safety licensees in the 800 MHz band must follow the interference mitigation measures set forth in the Best Practices Guide, provided such non-Public Safety licensees meet the signal strength thresholds (*i.e.*, -101 dBm (portable) and -104 dBm (mobile)) and minimum receiver performance standards established in the *R&O*.
- Voluntary Agreements. CMRS licensees and 800 MHz high-site licensees may execute mutual agreements incorporating alternative interference protection standards and remedial measures during the band reconfiguration transition period.
- Automatic Effectiveness of Full Protection. Upon the completion of 800 MHz band reconfiguration in a NPSPAC Region, the Transition Period Interference Protection Standard described above would terminate and be immediately and automatically replaced by the interference abatement measures and standards set forth in paragraphs 88-141 of the *R&O* for all high-site licensees operating below 817/862 MHz.

### **Effectiveness of Transition Period Interference Protection Standard**

- The proposed Transition Period Interference Protection Standard (with the -85/-88 dBm signal strength threshold) would enable the FCC to require active participation of both Nextel and cellular licensees in mitigating their contribution to CMRS – public safety interference.
- Nextel has evaluated the proposed Transition Period Interference Protection Standard by applying it to 42 randomly selected locations where CMRS – public safety interference has been reported. The evaluation indicated that under the proposed transition standard, the reported interference would be temporarily mitigated for between 86% and 92% of these locations, pending the completion of band reconfiguration.
- The City and County of Denver provide a useful example that further demonstrates that the proposed Transition Period Interference Protection Standard will provide significant interference relief even before 800 MHz band reconfiguration is completed.
  - Denver has experienced CMRS – public safety interference at 40 different locations.
  - At 39 of these locations, the public safety system has a signal strength of -85 dBm or stronger using Class A receivers. CMRS carriers would consequently be required to comply with the full interference abatement measures set forth in the *R&O* at each of these 39 locations under the Transition Period Interference Protection Standard.
  - This is a higher level of interference mitigation than Denver is receiving today.